

# Electro-Voice® SERVICE DATA

## DISASSEMBLY PROCEDURE FOR STANDARD FRONT-LOADED ELECTRO-VOICE BOOKSHELF SPEAKER SYSTEMS

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MODELS COVERED: E-V Four-A, E-V Five-C, E-V Six-B, E-V Eight-A, E-V Nine, E-V Eleven-A, E-V Twelve, E-V Thirteen, E-V Fourteen, E-V Fifteen and E-V Sixteen.

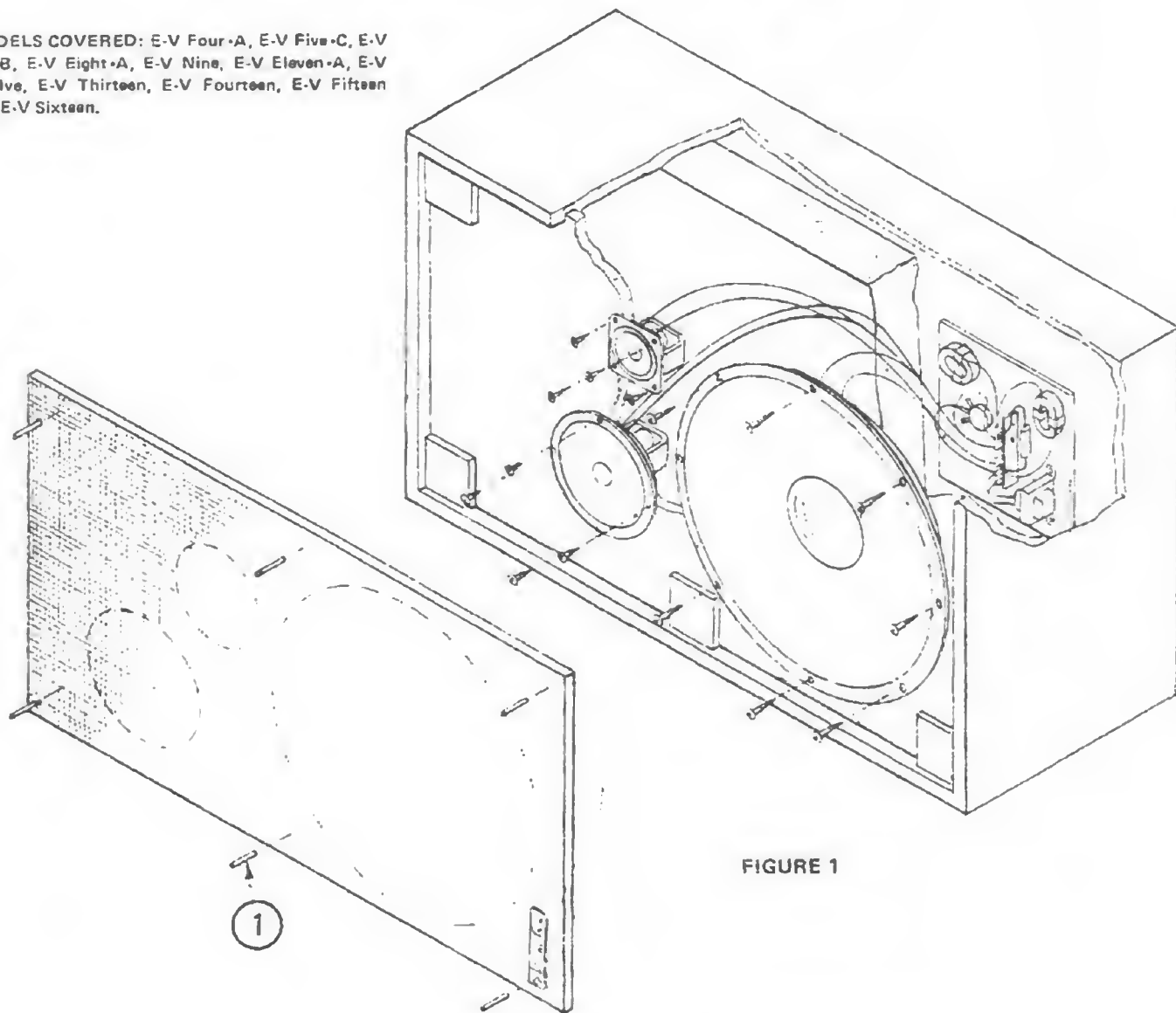


FIGURE 1

### GRILLE ASSEMBLY

1. The Grille Assembly on all Electro-Voice front-loaded bookshelf speaker systems is secured with Spotnail Pins (1). Locate these pins in grille cloth web and carefully drive 1/4-inch into enclosure with small punch or nail (Figure 1). All models contain (6) six pins except E-V Eight-A, which contains (4) four pins. 1 1/4-inch should be sufficient to free the grille assembly from Spotnail Pins. Slight air leaks may develop if a pin punctures the inner enclosure space. The pins should be left in the enclosure if they are not to be reused. See Grille Cloth reassembly.)

NOTE: Earlier models may contain Hook and Pile Grips (VELCRO) instead of Spotnail pins.

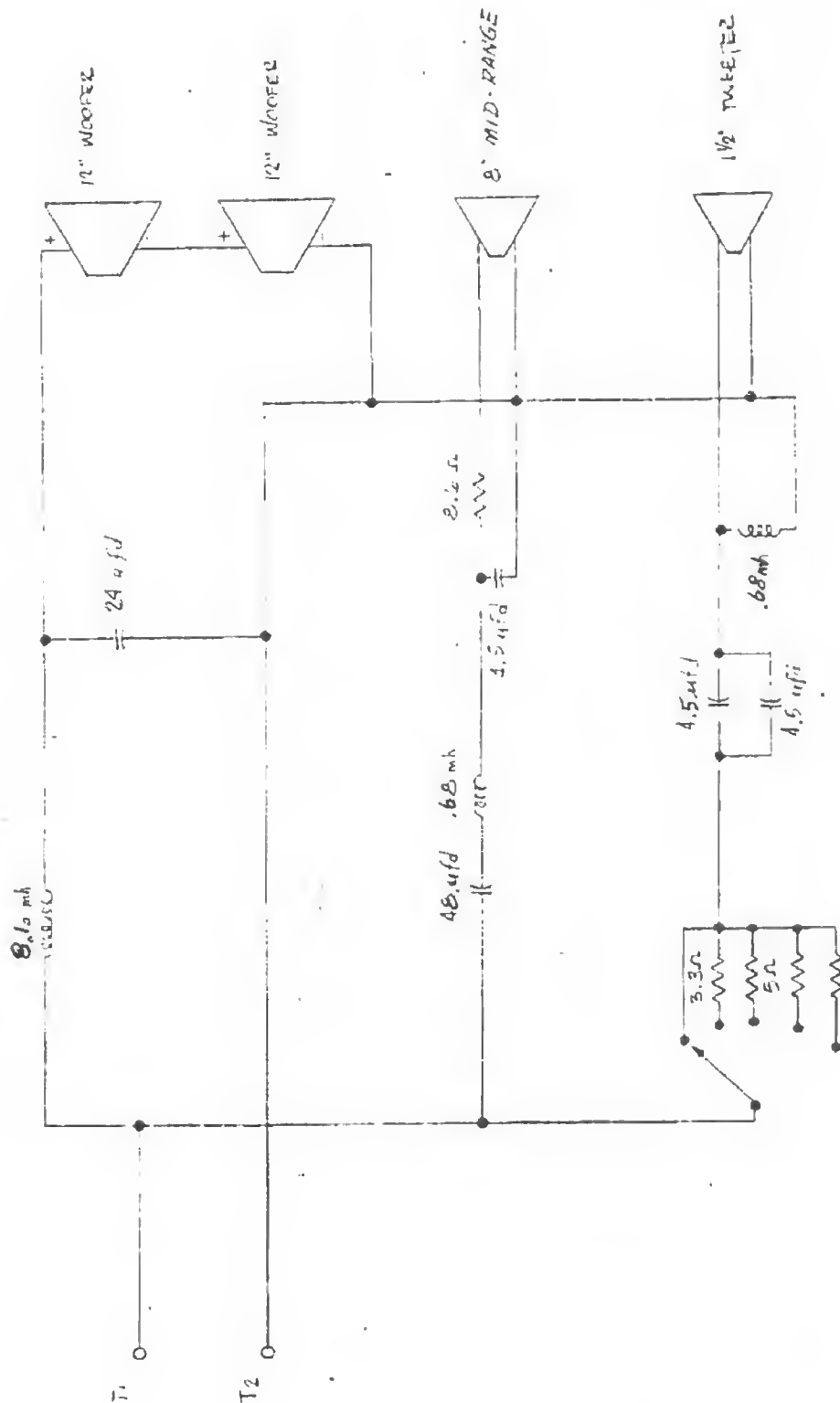
2. Remove Grille Assembly by one of the following recommended methods:
  - a. Remove grille by pulling out carefully with the fingers.
  - b. Drive a small nail with a large head through grille cloth web at one end of assembly. Center nail in web cross hatch (Figure 2). Remove grille cloth and baffle assembly by pulling out carefully on nail.

NOTE: On models E-V Four-A and E-V Five-C, the grille cloth and baffle assembly includes the wood grille trim. On Model E-V Nine, the wood grille trim is part of the cabinet assembly and does not remove with the grille cloth and baffle assembly.

CAUTION: DO NOT use a flat blade instrument to pry the grille cloth and baffle assembly from the side. Damage to the enclosure cannot be avoided.

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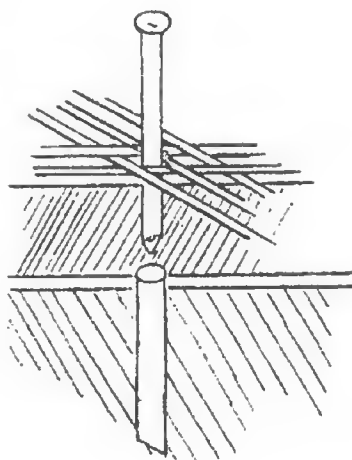


FIGURE 2

### SPEAKER REMOVAL/SERVICING

Speaker components in Electro-Voice speaker systems are secured with screws and sealed with a clear silicon sealer (E-V No. 97020) for an airtight seal. (All systems are sealed except models E-V Eleven-A and E-V Twelve which are ported bass reflex types and do not require an air seal.) The silicon sealer is reusable and should not require additional sealing material if speaker is returned to the original mounted position. Earlier models that were sealed with black Mortite may require additional sealing material.

1. Remove screws securing speaker to be replaced.
2. Work speaker loose from sealer by placing screwdriver blade under speaker edge and twist.
3. The internal speaker wiring employs both push-on connectors and soldered connections. The speaker highside or positive terminal is identified by a color phasing dot near the terminal. The common or negative terminal is unmarked. When replacing speaker, make certain that wire leads are phased correctly. On several models, the midrange or tweeter speaker is connected reverse-phase from the inphase bass speaker:  
Tweeter reverse-phased: E-V Eight-A, E-V Nine and E-V Twelve.

Midrange reverse-phased: E-V Four-A, E-V Six-B, and E-V Fifteen.

Inphase systems: E-V Five-C, E-V Thirteen, E-V Fourteen and E-V Sixteen.

Standard speaker color coding on E-V speaker systems is:

Red . . . . .	Woofers
Green . . . . .	Midrange
Yellow . . . . .	Tweeter
Black . . . . .	Common

NOTE: On Models E-V Six-B and E-V Nine; White — Woofers, Red — Midrange, Green — Tweeter; E-V Twelve woofer phase dot receives coded lead of cable assembly.

To check a speaker voice coil, use a 1.5 volt battery. Connect battery terminals as shown in Figure 3, positive to terminal with phasing dot. The speaker cone should move out with a scratching sound.

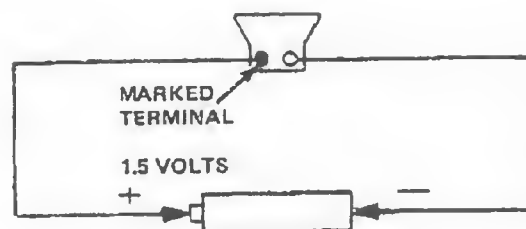


FIGURE 3

### CROSSOVER SERVICING

**CAUTION:** When working with fiberglass, it is recommended that long sleeves, gloves, and safety glasses be worn.

It is recommended that speaker systems with defective crossover networks be returned to Electro-Voice for servicing. Despite rigid quality control standards, occasional latent defects do appear. It is suggested that solder connections should be checked for good contact. Tweeter level controls should be checked in relation to tweeter defects.

To gain access to the crossover assembly, remove woofer (large speaker) and then carefully remove the interior fiberglass. Note mounting position of fiberglass in enclosure. Fold fiberglass in half lengthwise to remove.

**Additional Service Hints:** Crossover capacitors **MUST** be replaced with the metalized mylar or non-polarized electrolytic types. Inductors consist of No. 21 wire or larger.

**NOTE:** If the crossover assembly is removed, it must be correctly sealed when replaced for an airtight seal.

### REASSEMBLY CHECK LIST

1. Fiberglass properly installed.
2. Speaker wire leads properly phased.
3. Speaker electrical check. (Audio sound)
4. Speakers properly sealed and secured.
5. Enclosure air seal check.
6. Grille cloth and baffle assembly properly secured.

**THE SPEAKER SYSTEM MUST BE SEALED AIRTIGHT.**

### ENCLOSURE AIR SEAL CHECK

(This check does not apply to ported models E-V Eleven-A and E-V Twelve.)

Once all components, except grille assembly, are installed and secured check the system air seal by carefully pushing down on the woofer speaker cone by hand. The woofer cone must take at least (3) three seconds to return completely to restored position. If cone returns to restored position in less than three seconds, there is an excessive air leak in the enclosure which must be corrected or the system will have distortion.

### GRILLE CLOTH AND BAFFLE ASSEMBLY

The grille cloth and baffle assembly may be secured to the enclosure by either reusing the Spotnail Pine (1) or by using small finishing nails. If the pins were driven into the enclosure flush with the surface, it is suggested that small finishing nails be used. Insert the pins in original positions, or insert finishing nails near pin locations. Properly locate pin or nail in grille cloth web and drive into assembly.